

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 April 2004 (29.04.2004)

PCT

(10) International Publication Number
WO 2004/036344 A2

- (51) International Patent Classification⁷: **G06F**
- (21) International Application Number:
PCT/IL2003/000848
- (22) International Filing Date: 19 October 2003 (19.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/418,220 15 October 2002 (15.10.2002) US
- (71) Applicant (for all designated States except US): **ACTIVE-BASE LTD.** [IL/IL]; 15 Aluf Sade St., 53583 Givatayim (IL).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

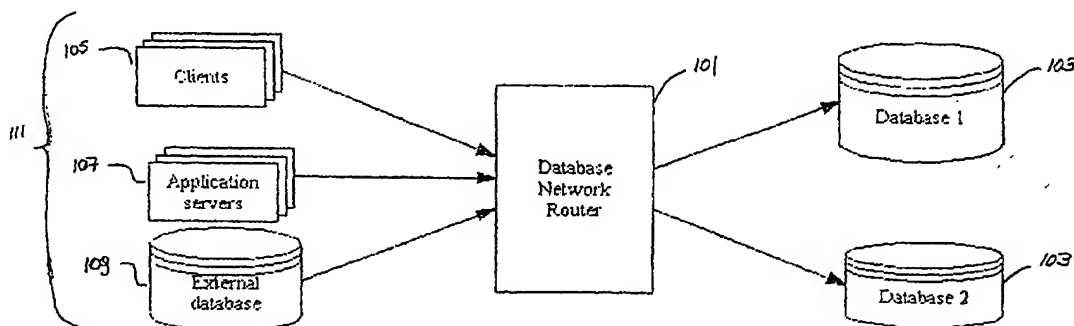
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BOUKOBZA, Eric** [IL/IL]; 15 Aluf Sade St., 53583 Givataim (IL). **NISSENBOIM, Yoram** [IL/IL]; 15 Aluf Sade St., 53583 Givataim (IL).
- (74) Agent: **FRIEDMAN, Mark, M.; DR. MARK FRIEDMAN LTD.**, 7 Haomanim Street, 67897 Tel Aviv (IL).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD FOR THE OPTIMIZATION OF DATABASE ACCESS IN DATA BASE NETWORKS



(57) Abstract: A database network router (DNR) in a database network includes a client access module and a database resource manager that communicate with each other using a common software interface. The client access module communicates with clients including application servers and external database servers; and the database resource manager communicates with the database servers. The DNR also includes a protocol manager for handling multiple database protocols. The database network router also includes local data cache storage to store commonly used data objects, results of parsed query statement, non-optimized query statements, and optimized alternatives and assigns a priority to each client on log-in. The DNR provides a method for connections pooling, a method for balancing the load in a database networks and a method for synchronizing the data stored in cache memory with the database network and method for synchronizing the data stored in cache memory with the database to insure data reliability. The DNR also provides a method for monitoring and optimizing data queries to improve the performance of the database network. The DNR also provides a method to migrate from an old to a new version of the database.